SARA Title III Section 313
Inspection Log Sheet

Report #: 00-3134-014

Facility: NICE SPECIALTY BEARINGS

Location: 2060 DETWILER ROAD
KULPSVILLE, PA 19443-0307

Date of Inspection: DECEMBER 13, 1999

Date Inspection Report Completed: DECEMBER 13, 1999

Preliminary Compliance Determination: No evidence of violations (CG/ 12/16/99)

Date Referred To RC For Review/Concurrence:

Date Administrative Complaint signed:

Date NCN Issued:

Date Withdrawn:

Date Of Close-Out: 12/16/99

Comments: OPEN AND COOPERATIVE.

SARA TITLE III SECTION 313 INSPECTION REPORT
99-313U- 014

I. **Facility**

NICE SPECIALTY BEARINGS
2060 DETWILER ROAD
KULPSVILLE, PA 19443-0307
SIC: 3562

II. **Date of Inspection**

DECEMBER 13, 1999

III. **EPA Inspector**

Donald W. Stanton
Technical Advisor
Toxics Enforcement Branch (3WC33)
(215) 814-2156

IV. **Company Officials**

MICHAEL COLLINS, ENGINEERING MGR.
ROBERT W. CRAWFORD, CORPORATE RISK MGR.
MICHAEL J. PFEIFFENBERGER, PLANT MGR.
PATRICK MEHASSIC, MATERIALS' MGR.
[redacted]

Purpose of Inspection

NICE BALL BEARINGS INC. is a manufacturer of BALL AND ROLLER BEARINGS and has not submitted a form R under Section 313 of SARA Title III for the following reporting years: 1996, 1997, and 1998 FOR METALS. This inspection was conducted to inspect, document, and verify the facility's compliance with the reporting requirements stated in 40 C.F.R. Part 372 under Section 313 of SARA Title III.

VI. **Opening Conference**

1. **Inspection Procedures and General Information**

On DECEMBER 13 1999 a Section 313 inspection was conducted at NICE SPECIALTY BEARINGS. Approximately 26 days prior to the inspection a letter was sent to the company confirming the date of the inspection (attachment D). The EPA inspector met with company representatives at 10^00 am. The inspector's credentials were presented and a Notice of Inspection was presented and explained. Mr. COLLINS signed the notice and an outline of the areas to be investigated was discussed.

2. **Facility Description**

NICE SPECIALTY BEARINGS is privately owned.

is responsible for environmental matters. The plant is the only plant and serves as headquarters as well. The facility produces

Year	Sales	Employees
1996	18,000,000	110
1997	17,000,000	110
1998	16,000,000	110

SARA Title III

Section 313 was the primary focus of the inspection. The facility was phoned prior to the inspection to determine if an inspection was warranted (attachment E). In addition, compliance with Sections 302,311, and 312 was checked. A copy of the letter sent to the facility confirming the date of inspection (attachment D) was sent to the Superfund Removal Branch to allow them the option to further investigate compliance with Sections 302, 311, and 312 at their discretion.

A plant, factory, or other facility comes under the provisions of Section 313:

1. If it conducts manufacturing operations (that is if its primary Standard Industrial Classification Code (SIC) is from 2000 through 3999;

2. If, in addition, it has 10 or more full-time employees; and

3. If it manufactures (including imports) or processes more than 75,000 pounds of a listed toxic chemical during any calendar year 1987 or manufactures (including imports) or processes more than 50,000 lbs. during calendar year 1988, or manufactures (including imports) or processes more than 25,000 lbs. during calendar year 1989 or later, or otherwise uses more than 10,000 pounds of a listed toxic chemical during any calendar year.

Mr. Collins stated that the plant's primary SIC Code is 3562. The remainder of the inspection involved determining if the plant manufactured, processed, or otherwise used any one of the listed toxic chemicals in excess of the thresholds in calendar years 1996, 1997, and 1998.

Mr. Collins stated that the facility does not manufacture any chemicals at their plant and no chemicals are imported into the facility.

For the inspection, they had compiled summaries of usages of Section 313 chemicals as shown in attachment #1. Section 313

chemicals are summarized as follows:

Usage in Pounds

Year	METHANOL	CHROMIUM	NICKEL
1996	169,161	24,320	1606
1997	106,246	23,305	1466
1998	119,273	21,500	1334

METHANOL is used to provide a CASE HARDENING atmosphere FOR housings of the ball BEARING assembly and is considered as otherwise used. CHROMIUM and NICKEL are CONTAINED IN the housings and are considered as processed.

VIII. **Closing Conference**

Appropriate documents were requested by the EPA Inspector and the SARA Title III Section 313 investigation was concluded. Receipt for Samples and Documents was filled out at the end of all inspection activities.

IX. **Attachments**

A. Notice of Inspection
B. Receipt for Samples and Documents
C. FTTS Summary
D. Letter to Facility Confirming Date of Inspection
E. Initial telephone call record.
1. Summary of Section 313 chemicals used
2. MSDS SHEETS
3. COMPANY BROCHURE.

X. Summary of Findings

Nice Specialty Bearings did not submit Form Rs under Section 313 of SARA Title III for the following reporting years: 1996, 1997, 1998, for metals. The records showed that the facility had greater than 10 employees (110) and is a manufacturer (SIC Code 3562). In addition, the records showed that the facility did not exceed the threshold for any listed Section 313 chemical during a calendar year. Therefore, the facility is currently in compliance with SARA Title III Section 313.

It should be noted that methanol has been consistantly reported from 1987 through 1998. It should also be noted that the balls from the ball bearings are inserted as received from their supplier and no work is performed on them which explains why they did not exceed the threshold for metals. Also the vast majority (over 90%) of the production are not manufactured from stainless steel.

ATTACHMENT A

US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA Superfund Amendments and Reauthorization Act - Title III
Emergency Planning and Community Right-to-Know Act of 1986
NOTICE OF INSPECTION

Form Approved
OMB No. 2070-0007

1. INVESTIGATION IDENTIFICATION			2. TIME	3. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.		
12/13/95	A-III-003	01	10 00 am	NICE SPECIALITY BEARINGS

4. INSPECTOR ADDRESS	5. FIRM ADDRESS
US EPA Region III 1650 Arch Street - 3WC33 Philadelphia, PA 19103	2060 DETWILER RD. KULPSVILLE, PA 19443-0307

REASON FOR INSPECTION

This inspection is for the purpose of determining compliance with the Emergency Planning and Community Right-to-Know Act of 1986, Section 313, Toxic Chemical Release reporting requirements. The scope of this inspection may include but is not limited to: reviewing and obtaining copies of documents and records; interviews and taking of statements; review of manufacturing, importing, processing, use, and/or waste treatment facilities; taking samples and photographs, and other inspection activities necessary to determine compliance with the Act.

INSPECTOR SIGNATURE		RECIPIENT SIGNATURE	12-13-95
Donald W. Light		Michael Collins	
NAME		NAME	
Donald W. Stanton		Michael Collins	
TITLE	DATE SIGNED	TITLE	DATE SIGNED
Inspector/Technical Advisor	12/13/95	Engineering Mgr.	12/13/95

ATTACHMENT B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA

Superfund Amendments and Reauthorization Act - Title III
Emergency Planning and Community Right-to-Know Act of 1986

RECEIPT FOR SAMPLES AND DOCUMENTS

Form Approved.
OMB No. 2070-0007

1. INVESTIGATION IDENTIFICATION			2. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.	NICE SPECIALTY BEARINGS
12/13/99	A-III-003	01	

3. INSPECTOR ADDRESS	4. FIRM ADDRESS
US EPA Region III 1650 Arch Street - 3WC33 Philadelphia, PA 19103	2060 DETWILER RD. KULPSVILLE, PA 19443-0307

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Emergency Planning and Community Right-to-Know Act of 1986.

RECEIPT OF THE DOCUMENT(S) AND/OR SAMPLE(S) DESCRIBED IS HEREBY ACKNOWLEDGED:

NO.	DESCRIPTION
1.	USAGE DATA
2.	ANALYSIS
3.	COMPANY BROCHURE

Chemical identities for underlined items have been claimed as trade secret. The facility official requesting such treatment has read and understands EPCRA Section 322 and pertinent trade secret regulations and understands EPCRA Section 325 which provides for (among other things) penalties for frivolous claims.

INSPECTOR SIGNATURE	RECIPIENT SIGNATURE
Donald W. Stanton	Michael Collins
NAME: Donald W.Stanton	NAME: Michael Collins 12-13-99
TITLE: Inspector	DATE SIGNED: 12/13/99
	TITLE: Engineering Man.
	DATE SIGNED: 12/13/99

ATTACHMENT C

REV. 1/99

Return Form To: _Donald Stanton_

FTTS DATA ENTRY FORM

INSPECTION

Inspection Date 12/13/99
Inspector Number 83003
Inspection Seq. 01
Legislation Ind. E **Investigation Type** EEA
Inspection Status ____
Region/State 03
Inspector Name Donald Stanton
Reason for Inspection NSR Referral ____
File Number 00-313U-014
Date Rpt. Rec. 12/13/99 Warrant Required No

Number of Samples 0
CBI: y__n X Number School ____
School Type ____
Facility Function MN
EPA Established ____
Number of Audits ____
Prod. Reg. # ____

REMARKS:

Site Name: Nice Specialty Bearings
Address: 2060 Detwiler Road
City: Kulpsville State: PA
Zip Code:19443-0307

Site Duns No.: ____ ____ ____ ____ ____ ____
Site SIC Codes No.: 3562

Parent Co. Name:RBC Systems Inc.
Parent Co. City: Woodbridge
State: CT Zip Code: 06525

Identifier :
Rep_Comp :
Field_Cit :
Longitude :
Latitude :

CASE REVIEW

Inspection Date: / /
Inspector Number: ____

Inspection Seq.: ____ **Samples Number:** ____

Docket Number: ____ Case Number: ____
Linked Docker 1: ____ Linked Case 1: ____
Linked Docket 2: ____ Linked Case 2: ____
Linked Docket 3: ____ Linked Case 3: ____
Linked Docket 4: ____ Linked Case 4: ____

Site Name: ____
File Number: ____
Referral Type: ____ Region/State: ____
Legislation Ind: ____ CBI: y__n__
Case Review Officer: ____
Date Review Started: / /
Date Review Completed: / /
Action Warranted: ____
Investigation Type: ____

REMARKS: ____
ACTTYPE: ____
CASE DEVELP: ____
CASE NUM: ____
DOCKET NUM: ____
DATE ORC: ____
DATE ISSUE: ____

SAMPLES

Inspection Date / /
Inspector Number: ____
Inspection Sequence: ____
Sample Number: ____

Site Name: ____
Lab Name: ____
Sample Medium: ____
Prod Reg #: ____
Date Sample Sent: / /
Date Results Received: / /
Violative: ____

REMARKS: ____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
PHILADELPHIA, PENNSYLVANIA 19103-2029

ATTACHMENT D

November 17, 1999

Mr. Michael Collins, Engineering Mgr.
Nice Specialty Bearings
2060 Detwiler Road
Kulpsville, PA 19443-0307

RE: Superfund Amendments and Reauthorization Act (SARA) Title III Section 313 Inspection

Dear Mr. Collins:

This is to confirm that Mr. Donald W. Stanton will visit your facility on December 13, 1999 at 10 am to conduct a SARA Title III inspection. Mr. Stanton is a member of the National Council of Senior Citizens designated by the EPA Administrator to conduct inspections under Title III. To save time during the inspection, please have available for review and collection by the inspector the following documents for 1996,1997, and 1998 calendar years:

- A list of all EPCRA Section 313 chemicals used for each year specified above;
- Annual usage summaries (pounds) of each EPCRA Section 313 chemical with supporting documentation for each year indicated above (supporting documentation should include such items as beginning and end of year inventory, purchase records, and if applicable, import records);
- Chemical production records for all Section 313 chemicals or chemical categories manufactured, processed, or otherwise used at your facility.
- **Note:** If your facility manufactures, processes, or otherwise uses mixtures which contain Section 313 chemicals, please provide for each of these mixtures a copy of the Material Safety Data Sheet (MSDS), or other written notification which specifies the chemical composition of the mixture.

In addition to the above items, please notify him of any safety equipment (e.g. eye or ear protection, safety shoes, hard hat, etc.) he should bring with him to the inspection. If time permits, he will tour your plant. Should you have any questions, please call Mr. Stanton at (215) 814-2156.

Sincerely,

for Craig E. Yussen
EPCRA Section 313 Compliance Coordinator
EPA Region III

cc: Section 313 State Contact
Carole A. Dougherty (3HS33)

00-3134-014

MONTGOMERY
LANSDALE
MAKE LEFT
at Red light
1ST Red light
LEFT 40 FT ROAD
LEFT at NEXT Red

NICE BALL BEARING

SENT
FULL PACKAGE
11/10/99.
* ADVICE LETTER

ATTACHMENT E

EPA REGION III

INITIAL TELEPHONE CALL RECORD

Facility Name: NICE SPECIALTY BEARINGS Div RBC SYSTEMS. *Date of Call:* 11/10/99.

ON L.H SIDE PAST Retirement

Facility Address: 2060 Detwiler RD.

Kulpsville, PA 19443-0307

Facility Contact: MICHAEL COLLINS ENGINEERING MGR.

Phone Number: 215-256-6681 → (EXT. 5559)
800-321-6423

Inspector Making: SIANTON

Call:

QUESTIONS

1) *Are you familiar with SARA Title III?* Yes ✓ No __

(If yes, move to question 2. If no, give brief explanation.)

2) *Are you familiar with Section 313 of SARA Title III?* Yes ✓ No __

(If yes, move to question 3. If no, give brief explanation.) Yes ✓ No __

3) *Did you report under Section 313 for the 1996 year?* Yes __ No __

4) *Did you report under Section 313 for the 1997 reporting year?* Yes __ No __

5) *Did you report under Section 313 for the 1998 reporting year?* Yes __ No __

NOT FOR MOTALS

NICE SPECIALTY BEARINGS
Div R B C Systems Inc
2060 Detwiler Rd (19443-9999)
PO Box 307 (19443-0307)
Phone.....215 256-6681
Natl Toll Free: 800 321-6423 ®
FAX: 215 256-5507
V P & Gen Mgr: Phil Beausoueil
Controller: Megan Hausler AMMON.
Sales/Mktg Mgr: Scott Anderson & MOTHANO
Purch Agent: David Boren
Personnel Mgr: Anna Koltonuk 87-95
Dir Engineering: Chuck White
◆EMP: 120 EST: 1901
EST. SLS: $10MM-24.9MM NO MOTALS?
Privately Owned
SIC: 3562 3568 Ball & roller bearings
HQ: R B C Systems Inc
21 Hazel Ter
Woodbridge, CT 06525
203 389-5590

ASM Ratio
under 25,000

3562

6) *SIC Code:* 3568

7) *Nature of Business? (I.e. do you do any manufacturing or process at your site or are you just a distribution or sales center?)*

MANUFACTURE BALL & ROLLER BEARINGS

8) *# of Employees:* 1996: 110; 1997: 110; 1998: 110 120 EMP 10-25 mm.

9) *Do you use any chemicals at your facility?* Yes ✓ No ___

10) *Do you use any Section 313 listed chemicals?* Yes ✓ No ___
313 Listed Chemicals: METHANOL, AMMONIA
CHROMIUM, NICKEL, MANGANESE.

11) *Did you determine if you were subject to Section 313 reporting?* Yes ✓ No ___

12) *Did your facility report under § 302 (notification of SERC if an EHS is present on your site at quantities above TPQs) and 303 (if subject to §302, notified LEPC of a selection of a facility representative?)* Yes ___ No ✓

13) *Did your facility report under § 311 (submission of MSDSs or list of MSDs chemicals to SERC, LEPC, and local fire department by 10/17/87 if applicable thresholds were exceeded?)* Yes ✓ No ___

14) *If your facility needed to comply with § 311, did your facility submit the required Tier 1 or Tier II forms to the appropriate agencies for:*

a) *the 1996 reporting year by 3/1/97?* Yes ✓ No ___

b) *the 1997 reporting year by 3/1/98?* Yes ✓ No ___

c) *the 1998 reporting year by 3/1/99?* Yes ✓ No ___

15) *Did phone call result in an inspection?* Yes ✓ No ___

If yes, date and time DEC 13, 1999 - 10⁴⁰ am.

16) *Comments:* IN PAST MADE 20,000,000 BALL BEARING.
NOW = 14,000,000
USING 52100 (440C STAINLESS MOSTLY)

10mm rings.

14,000,000
if .15 lb 2,100,000 lb
if 18% Cr = 378,000 lb } BUT NOT ALL STAINLESS
(1.45 OR 18%)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

November 10, 1999

Mr. Michael Collins, Engineering Mgr.
Nice Specialty Bearings
2060 Detwiler Road
Kulpsville, PA 19443-0307

RE: Superfund Amendments and Reauthorization Act (SARA) Title III Section 313 Inspection

Dear Mr.Collins:

This will confirm that Mr. Donald W. Stanton of my staff will advise you when he will visit your facility to conduct a SARA Title III inspection. Mr. Stanton is a member of the National Council of Senior Citizens designated by the EPA Administrator to conduct inspections under Title III.

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In addition to the above items, please notify him of any safety equipment (e.g. eye or ear protection, safety shoes, hard hat, etc.) he should bring with him to the inspection. If time permits, he will tour your plant. Should you have any questions, please call Mr. Stanton at (215) 814-2156.

Sincerely,

Craig E. Yussen
EPCRA Section 313 Compliance Coordinator
EPA Region III

cc: Section 313 State Contact
Carole Dougherty (3HS33)

12-13-98

MIKE COLLINS

12/08/1999

ATTACHMENT #1

STEEL CONSUMPTION

1998	STEEL	LBS.	CR	LBS. CR	NI	LBS. NI
	440C SS	84000	18% MAX	15120	.0054% MAX	453.6
	52100	440000	1.45% MAX	6380	.002% MAX	880
	LOW CARBON	189000	0	0	0	0
	TOTAL LBS	713000		21500		1333.6

1997	STEEL	LBS.	CR	LBS. CR	NI	LBS. NI
	440C SS	90000	18% MAX	16200	.0054% MAX	486
	52100	490000	1.45% MAX	7105	.002% MAX	980
	LOW CARBON	208000	0	0	0	0
	TOTAL LBS	788000		23305		1466

1996	STEEL	LBS.	CR	LBS. CR	NI	LBS. NI
	440C SS	90000	18% MAX	16200	.0054% MAX	486
	52100	560000	1.45% MAX	8120	.002% MAX	1120
LOW CARBON		240000	0	0	0	0
	TOTAL LBS	890000		24320		1606

12-1-99

INTER-OFFICE LETTER

DATE: December 1, 1999

TO: M. Collins

CC: R. Anglada
R. McClincey
S. Mease

FROM: P. Mehaffie

SUBJECT: ESTIMATED ANNUAL STEEL USEAGE

Estimated annual consumption of steel is as follows:

ACTUALLY 88,080 lbs

	1998	1997	1996
440C Stainless	84,000 lbs.	90,000 lbs.	90,000 lbs.
52100	440,000 lbs.	490,000 lbs.	560,000 lbs.
Low Carbon	189,000 lbs.	208,000 lbs.	240,000 lbs.

	C	R
7472	.026	.097
7473	.078	.210

1997
208K
217K

5408 20176
16926 45570
88080

Pat Mehaffie
12/13/99

MIKE COLLINS

12-17-99

12/09/1999

METHANOL USAGE

6.616 #/ / GAL

	DATE	WGT/GALS	
1997	01/14/1997	2068	
	03/27/1997	1999	
	05/07/1997	1988	
	06/13/1997	2001	
	08/05/1997	2006	
	09/10/1997	1997	
	10/17/1997	2000	
	11/24/1997	2000	
	TOTAL	16059	106246.3 LBS.
1998	01/16/1998	2000	
	02/24/1998	2022	
	03/27/1998	2001	
	05/11/1998	1998	
	06/17/1998	2001	
	08/06/1998	2000	
	09/18/1998	2001	
	10/19/1998	2001	
	11/18/1998	2004	
	TOTAL	18028	119273.2 LBS.

1996 = 169,161 lb. — 12-13-99

This is approx — 5% less. on Line.

METHONAL UASGE.xls

...ER AVE. S.W.

CERTIFICATE OF TEST

CANTON, OHIO 44706

TIMKEN

WORLDWIDE LEADER IN BEARINGS AND STEEL

DECEMBER 07, 1999

SOLD TO: NICE BALL BEARINGS INC.
2060 DETWILER ROAD
KULPSVILLE PA 19443 USA

SHIP TO: NICE BALL BEARINGS INC
2060 DETWILER ROAD
KULPSVILLE PA 19443 USA

DESCRIPTION OF MATERIAL: ELECTRIC FURNACE "DEGASSED" 52100 BEARING, AIRCRAFT QUALITY
SPHEROIDIZE ANNEALED - ROTOROLLED SPEC: AMS-2301H, SKF
N471563AF-Y REV. AF OF 1989/05/17
TUBE NO. 903

TIMKEN ORDER 82664 RELEASE A CUSTOMER ORDER 5507325
SIZE OD .903" WALL .125" ID .653"

CHEMICAL ANALYSIS

HEAT	C	MN	P	S	SI	CR	NI	MO	CU	PIECE NO.	CV NO.
J3130 LADLE	1.00	.35	.014	.014	.27	1.43	.11	.04	.24		

HEAT	AL	TI	O	PIECE NO.	CV NO.
J3130 LADLE	.031	.002	.0007		

HEAT	GRAIN SIZE
J3130 LADLE	9

ROCKWELL C HARDNESS

HEAT	PIECE NO.	RANGE
J3130		29.0/ 30.0

WHEN SHIPPING NOTICE IS ATTACHED IT BECOMES PART OF THIS CERTIFICATION

WE CERTIFY THE ABOVE MATERIALS HAVE BEEN INSPECTED AND TESTED IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS, AND THE RESULTS OF SUCH INSPECTIONS AND TESTS CONFORM WITH THE APPLICABLE REQUIREMENTS.

APPROVED BY: JEPSON _____ NOTARY PUBLIC

BY Jeff Jepson
Jeff Jepson
Supervisor-Met. Order Processing

Bearing Company of America

RECEIVING DOCUMENT

PAGE: 000
PMMRCVST

8:02:34

WAREHOUSE: 55 VENDOR ID: 66010
SHIP TO: 55 7324 NAME: EDGCOMB METALS CO
P.O. # : 5504 REL #:
REFER TO:

IRBC BEARINGS

POLINE	ITEM ID	ITEM DESC			NEED
MAJ LOC	MIN LOC	UOM	QTY EXPECTED	QTY RECEIVED	DATE
	VENDOR ITEM ID				
0001	~~RM-6X25-12L14~~	RAW MATERIAL			10/12/98
RM	RM.502.12L14	LBS	550.0000		

LOC ANT HEAT

OK 12/10/98 WRL

1-BBL ANT 518 HEAT YP5558

PACKING SLIP

Acceptance of this order is to be bound by the terms and conditions on the reverse side.

THIS IS **NOT** A PURCHASE ORDER OR RELEASE UNLESS SIGNED BY AUTHORIZED AGENT. ACKNOWLEDGE IMMEDIATELY.

SIGNED BY

...ADING — SHORT FORM ORIGINAL — Not Negotiable

...the classification and tariffs in effect on the date of the issue of this Bill of Lading,

MATERIAL CERTIFICATI
&
BILL OF LADING

NO: 49827

Baron Drawn Steel Corporation

...in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood ... as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route... It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service ... performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if ... rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
... hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment ... and terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

FOB	Ship Date	Carrier Name	Page
TOLEDO, OH.	JUNE 15, 1999	R R EXPRESS	01

Consigned To	EDGCOMB METALS CO. (Carrier Number)
Delivery Address	420 MEMORY LANE
Destination	YORK PA 17402 (County)

Subject to Section 7 of Conditions of applicable bi... if this shipment is to be delivered to the consignee with... on the consignor, the consignor shall sign the following... The carrier shall not make delivery of this shipm... payment of freight and all other lawful charges.

(Signature of consignor.)

DELIVERED/PREPAI

Received $

to apply in prepayment of the charges on the proper... hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount ...

Charges advanced: $

Shipping Instructions

----> PLEASE CALL FOR A DELIVERY APPOINTMENT
RECHRS 7AM-12PM PHONE: (717)755-1923

MUST BE BULKHEADED / TARP TO PROTECT FROM WEATHER

INVOICE NO.

Written By

Message

CERT & B/L COMBINED QUESTIONS-PLEASE CALL

BARON S.O.	C/H	SIZE	SHAPE	GRADE	LENGTH	WORK ORDER	HEAT NO.	WEIG...
29879	C/D	0-256000	RD	12L14	12-00	2-29879	Y85557	3.62
								3,75
CUST PO:EYK-11436					COLD FINISHED		TOTAL	7.37
33547	C/D	2-3/4	RD	12L14	12-00	7-32266	N6544H	3.95
CUST PO:EYK-12504					COLD FINISHED		TOTAL	3.95
33552	C/D	0-5/16	RD	12L14	12-00	2-30372	Y86172	3.92
CUST PO:EYK-12499					COLD FINISHED		TOTAL	3.92
3356[redacted]			RD	12L14	12-00	1-33125	Y85558 388	3.93
							389	3.94
CUST [redacted]					COLD FINISHED		TOTAL	[redacted]
33600	C/D	1-1/2	HX	12L14	12-00	7-31937	Y86145	3.98
CUST PO:EYK-12532					COLD FINISHED		TOTAL	3.98

BNDLS 7 TOTAL PAGE 27.12

	C	MN	P	S	PB
2-29879 / Y85557	.0900	1.0400	.0600	.3300	.15/.35
7-32266 / N6544H	.0700	1.0700	.0470	.3100	.15/.35
2-30372 / Y86172	.0900	1.0800	.0570	.3200	.15/.35
1-33125 / Y85558	.0900 ✓	1.0600 ✓	.0630 ✓	.3300 ✓	.15/.35 ✓

OK
No. 8477

10.14

If the shipment moves between two ports by a carrier by water, the law requires that the bill state whether it is carrier's or shipper's weight.
NOTE—Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

Baron Drawn Steel does not intentionally add or purchase steel bar products or other materials that are contaminated with Mercury.

TOTAL B/L

We certify that the above information is correct as contained in the records of Baron Drawn Steel Corporation

Shipper, Per ______ **Agent** ______ **Per** ______

Permanent post-office address of shipper:
BARON DRAWN STEEL CORPORATION
1420 BARON STEEL AVENUE, TOLEDO, OH 43607

SIGNED — METALLURGICAL MANAGER (TITLE)

1-2 HEAT
AJ8032

1002
.685
.689

OK
QC
4-8-99

1-2 ANT HEAT.

1-BBL ANT HEAT
1300 AJ8032

1-BBL ANT HEAT
300 AJ8107

PACKING SLIP

Acceptance of this order is to be bound by the terms and conditions on the reverse side.

THIS IS NOT A PURCHASE ORDER OR RELEASE UNLESS SIGNED BY AUTHORIZED AGENT. ACKNOWLEDGE IMMEDIATELY.

SIGNED BY

White Copy - *Original* Yellow Copy - *Purchasing* Pink Copy - *Accounts Payable* Gold Copy - *Packing Slip*

AL Tech Specialty Steel Corporation

90 Willowbrook Avenue, Dunkirk, N.Y. 14048

CERTIFICATE OF TEST

ACCEPTING MILL	PURCHASE ORDER NO. AND DATE		MILL ORDER NUMBER	DATE SHIPPED	INVOICE NO.
DUNKIRK	01-89530 AC6722	08/05/97	6-0-47730-01-001	/ /	

SOLD TO
A M CASTLE - VENDOR #144
ATTN: B. FREDERICKSON
3400 WOLF ROAD
FRANKLIN PARK IL 60131
TR

SHIP TO
A.M.CASTLE
3400 WOLF RD.
FRANKLIN PARK IL 60131
TAG FOR FRANKLIN PARK
TR

PRODUCT SPECIFICATIONS
AL TECH STAINLESS STEEL TYPE 440-C
ACG TO AMS-5630G QQS-763F AISI 440 UNS# S44004
COND A WVE CLM (3440-02-15)

ITEM	DESCRIPTION	QUANTITY	POUNDS
01	R .6875		4583

CHEMICAL ANALYSIS:

ELEMENTS & PERCENTAGES

HEAT NO.	C	MN	P	S	SI	CR	NI	MO	CU	CO
AJ8032	1.04	.52	.022	.002	.46	16.70	.34	.47	.11	.028
TEST #	C1719									

MECHANICAL PROPERTIES:

HEAT NO.	HARDNESS	GRAIN SIZE
AJ8032	BHN 229/235	9
	HARDENABILITY	
	RC 58.5	

IK RATING PER ASTM E-45

		A	B	C	D
T	THIN	0.0	1.0	0.5	1.0
	HEAVY	0.0	0.0	0.0	0.0
B	THIN	0.0	1.0	0.5	1.0
	HEAVY	0.0	0.0	0.0	0.0

CASTLE METALS-FP
DATE REC'D 5/7/98
REC'D FROM
APPROVED BY

MATERIAL FREE FROM MERCURY CONTAMINATION
MICRO TEST: O.K.
MACRO ETCH TEST: O.K.
DECARB FREE
"NOTE: KNOWINGLY AND WILLFULLY FALSIFYING OR CONCEALING A MATERIAL FACT ON THIS FORM OR MAKING FALSE OR FICTITIOUS OR FRAUDULENT ENTRIES ON THIS FORM COULD CONSTITUTE A FELONY PUNISHABLE UNDER FEDERAL STATUTES."
"AL TECH DOES NOT PERMIT OR EMPLOY INGOT, BILLET OR BAR REPAIR OR CONDITIONING BY METAL BUILD UP, SUCH AS WELDING."

NAFTA CERTIFIED NORTH AMERICAN DOMESTIC

Susan d Lisi
S. Lisi-TEST CERTIFIER 04/29/98
TEST CERTIFIER

THE TEST RESULTS SHOWN ABOVE ARE CERTIFIED TO BE A CORRECT STATEMENT OF RECORDS THAT WERE DERIVED FROM TESTING SAMPLES OF THE MATERIAL

Roller Bearing Company of America

DATE: 8/18/99 RECEIVING DOCUMENT
TIME: 6:04:30

WAREHOUSE: 55 VENDOR ID: 20045 55000
SHIP TO: 55 NAME: A M CASTED METAL & CC
P.O. # : 5506496 REL #:
REFER TO:

POLINE	ITEM ID	ITEM DESC		
MAJ LOC	MIN LOC	UOM	QTY EXPECTED	
VENDOR ITEM ID				
0001	RM1.00-52100	RAW MATERIAL		8/23/99
RM		LBS	1000.0000	

NO SAMPLES CUT.

2-24-99

Loc AMT HEA

8-25-99

1-BBL AMT 1014 HEAT L0622

PACKING SLIP

Acceptance of this order is to be bound by the terms and conditions on the reverse side hereof.

THIS IS NOT A PURCHASE ORDER OR RELEASE UNLESS SIGNED BY AUTHORIZED AGENT. ACKNOWLEDGE IMMEDIATELY.

SIGNED BY

White Copy - *Original* Yellow Copy - *Purchasing* Pink Copy - *Accounts Payable* Gold Copy - *Packing Slip*

CSC

4000 MAHONING AVE. N.W.
WARREN, OHIO 44483-1968

TEST REPORT

PAGE: of 1

NO.

CUSTOMER PURCHASE ORDER NUMBER & DESCRIPTION	ORIG. T.R. DATE	REV. T.R. DATE	SALES ORDER
29-14667	12/02/1998		61750

SOLD TO: HY-ALLOY STEELS CO.
5100 WEST 73RD STREET
CHICAGO IL 60638

SHIP TO: A. M. CASTLE & CO.
299 CANAL ROAD
FAIRLESS HILLS PA 19030

DESCRIPTION OF MATERIAL ORDERED

FEET:	PIECES	WEIGHT	SIZE	SHAPE:	LENGTH:
		12,000	1"	RD	12'/10'

PRODUCT DESCRIPTION:
SPH-ANN TURN POL OIL BQ

PART NUMBER: IAC-11758

GRADE: E52100 DH BQ

CSC010101
AMS 6440K EX MK
G52986-85 REV 1 6-23-97
ASTM A331-95
ASTM A892-88 (95) CS3 CN2 LC1 MAX
ASTM A29-93A
ASTM A295-94
UNSG52986

Heat No.	C	Mn	P	S	Si	Ni	Cr	Mo	Al	Cu	Ti	O2
60622	.99	.37	.011	.012	.23	.11	1.39	.05	.017	.13	.0017	.0008

Jominy	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	24	28	32	Gr Size
- 1 -	65	65	63	60	49	45	42	41		41		39		37		36		33	32	30	28	8-9
- 2 -																						

Material Stamped with Heat Code: LS

Hardness HB DECARB: NIL
SURFACE 187

Micro test satisfactory.

Macroetch equal to or better than R2, R1, C2, in accordance with ASTM E381-94.

Slice hardenability RC: 65/65

Country of origin USA - qualifies NAFTA harmonized tariff classification 7228.30 (hot rolled) and 7228.50 (cold finished) preference criterion B.

J-K Cleanliness Rating

		---A---		---B---		---C---		---D---	
Ingot		T	H	T	H	T	H	T	H
1	T	1.5	1.5	0.5	1.0	0.0	0.0	0.5	0.5
1	B	1.5	1.5	0.0	0.0	0.0	0.0	0.5	0.0
9	T	2.0	1.5	0.0	0.0	0.0	0.0	0.5	0.5
9	B	1.5	1.5	0.0	0.0	0.0	0.0	0.5	0.0
16	T	1.5	1.5	1.0	0.5	0.0	0.0	0.5	0.5
16	B	2.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0

CASTLE METALS - PHL
DATE REC'D: 1-21-99
REC'D FROM: CSC
APPROVED BY: gc
RD#: 24620
1AC: 11758

CSC MATERIAL IS NOT SUBJECTED TO MERCURY DURING PROCESSING OR TESTING. NO WELDING PERFORMED ON MATERIAL

MATERIAL PRODUCED AND CERTIFIED TO SPECIFICATIONS SHOWN ABOVE. NO ADDITIONAL CERTIFICATION IS IMPLIED OR WARRANTED.

We hereby certify that the above data are correct as contained in the records of CSC.

Veryl D. Kifer

Veryl D. Kifer,
Laboratory Services Superintendent

mfk 1-13-99

ANHy Ammonia

TANK

Deliveries DAY

1900 lbs. (3) 1-18-99

1960 (1) 3/25/

2000 (2) 10/14/

10 000 # / usage.

Material Safety Data Sheet

Hoechst Celanese

Chemical Group
Hoechst Celanese Corporation
* P.O. Box 819005 / Dallas, Texas 75381-9005
* Information phone: 214 277 4000
Emergency phone: 800 424 9300 (CHEMTREC)

12-17-99

Distributed By
R. W. EAKEN, INC.
P. O. BOX 171, LEESPORT, PA. 19533
215 - 926 - 2136

Methanol

6.616 /GAL

ATTACHMENT # 2 #56

Issued December 31, 1992

Identification

Product name: Methanol

Chemical name: Methanol

Chemical family: Alcohol

Formula: CH_3OH

Molecular weight: 32

CAS number: 67-56-1

CAS name: Methanol

Synonyms: Methyl alcohol; carbinol; monohydroxymethane; methyl hydroxide.

*** Transportation information**
Shipping name: Methanol
Hazard class: 3, Flammable Liquid
United Nations no.: UN1230
Packing group: II
Emergency Response Guide no.: 28
DOT Reportable Quantity: 5000 lb/2270 kg

Physical data

Boiling point (760 mm Hg): 64.6°C (148°F)

Freezing point: −97.8°C (−144°F)

Specific gravity (H_2O = 1 @ 20/20°C): 0.7925

Vapor pressure (20°C): 96.0 mm Hg

Vapor density (Air = 1 @ 20°C): 1.11

Solubility in water (% by WT @ 20°C): Complete

Percent volatiles by volume: 100

Evaporation rate (BuAc = 1): 2.0

Appearance and odor: Clear, colorless, mobile liquid with mild alcohol odor.

Fire and explosion hazard data

Flammable limits in air, % by volume
Upper: 36.5
Lower: 5.5

Flash point (test method):
Tag open cup (ASTM D1310): 60°F (15°C)
Tag closed cup (ASTM D56): 54°F (12°C)

Extinguishing media:
Use CO_2 or dry chemical for small fires, alcohol-type aqueous film-forming foam or water spray for large fires. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

Special fire-fighting procedures:
* If potential for exposure to vapors or products of combustion exists, wear complete personal protective equipment, including self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive-pressure mode.

Water spray can be used to reduce intensity of flames and to dilute spills to nonflammable mixture.

Unusual fire and explosion hazards:
Vapor is heavier than air and can travel considerable distance to a source of ignition and flashback. Material can burn with little or no visible flame.

Component information

(See Glossary at end of MSDS for definitions)

Component, wt. % (CAS number)	Exposure levels: OSHA PEL TWA; STEL	ACGIH TLV* TWA; STEL	IDLH	Subject to SARA §313 reporting?
* Methanol 99.8-99.85% (67-56-1)	200 ppm; 250 ppm (skin)	200 ppm; 250 ppm (skin)	25,000 ppm	Yes

1) All components listed as required by federal, California, New Jersey and Pennsylvania regulations

Special hazard designations

	HMIS	NFPA	Key
Health:	3	1	0 = Minimal
Flammability:	3	3	1 = Slight
Reactivity:	0	0	2 = Moderate
Personal protective equipment:	G	—	3 = Serious 4 = Severe

SARA §311 hazard categories

Acute health:	Yes
Chronic health:	Yes
Fire:	Yes
Sudden release of pressure:	No
Reactive:	No

Reactivity data

Stability:
Stable

Hazardous polymerization:
Will not occur.

Conditions to avoid:
Heat, sparks, flame.

Materials to avoid:
Sulfuric acid; oxidizing agents such as hydrogen peroxide, nitric acid, perchloric acid and chromium trioxide.

Hazardous combustion or decomposition products:
Carbon monoxide.

Health data

Effects of exposure/toxicity data

Acute

Ingestion (swallowing): Poisonous or fatal if swallowed. A small amount (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death (in humans) if treatment is not received. Practically non-toxic to rats (oral LD_{50}: 7.5 g/kg).

Inhalation (breathing): Extremely high levels cause stupor, headache, nausea, dizziness, unconsciousness and may produce adverse effects on vision. Practically non-toxic in rats (inhalation LC_{50}, 4 hrs: 64,000 ppm). Repeat exposure of monkeys to 5000 ppm 6 hr/day, 5 days/wk for 4 weeks caused no toxic response or effects on vision.

Skin contact: Repeated or prolonged contact causes drying, brittleness, cracking and irritation. Prolonged and repeated skin contact with methanol-soaked material has produced toxic effects including vision effects and death. Low toxicity to animals by skin contact (minimum lethal dose, monkeys: 1.6 g/kg).

Eye contact: May cause eye injury which may persist for several days. Liquid, and vapor in high concentrations, causes irritation, tearing and burning sensation.

(continued)

Chronic

Mutagenicity: *In vitro*, limited evidence of mutagenicity (mouse lymphoma forward mutation assay) *In vivo*, no information.

Carcinogenicity: No evidence of carcinogenic potential in limited animal studies in which methanol was given orally or applied to the skin.

Reproduction: Methanol – reported to cause birth defects in rats exposed to very high levels of vapors (20,000 ppm).

Medical conditions aggravated by exposure:
Significant exposure to this chemical may adversely affect people with chronic disease of the central nervous system, skin, gastrointestinal tract and/or eyes.

Emergency and first aid procedures

Ingestion (swallowing): Induce vomiting of conscious patient immediately by giving two glasses of water and pressing finger down throat. Contact a physician immediately.

Inhalation (breathing): Remove patient from contaminated area. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact a physician immediately.

Skin contact: Remove contaminated clothing and wash contaminated skin with large amounts of water. If irritation persists, contact a physician.

Eye contact: Flush eyes with water for at least 15 minutes. Contact a physician immediately.

Note to physician: When plasma methanol concentrations are higher than 20 milligrams per deciliter, when ingested doses are greater than 30 milliliters, and when there is evidence of acidosis or visual abnormalities, a 10% solution of ethanol in 5% aqueous dextrose, administered intravenously, is a safe, effective antidote *(Western Journal of Medicine*, March 1985, p. 337).

Spill or leak procedures

***Steps to be taken if material is released or spilled:**
Eliminate ignition sources. Avoid eye or skin contact; see "Special protection information" section for respirator information. Place leaking containers in well-ventilated area with spill containment. If fire potential exists, blanket spill with alcohol-type aqueous film-forming foam or use water spray to disperse vapors. Contain spill to facilitate clean-up. Clean-up methods may include absorbent materials, vacuum truck, etc. Avoid runoff into storm sewers and ditches which lead to natural waterways. Call the National Response Center (800 424 8802) if the quantity spilled is equal to or greater than the reportable quantity (5000 lb/day) under CERCLA "Superfund."

***Waste disposal method:**
All notification, clean-up and disposal should be carried out in accordance with federal, state and local regulations. Preferred methods of waste disposal are incineration or biological treatment in federal/state approved facility.

***Hazardous waste (40 CFR 261):**
Yes; hazardous waste codes U154, D001.

Special protection information

***Respiratory protection:**
Based on contamination level and working limits of the respirator, use a respirator approved by NIOSH/MSHA (the following are the minimum recommended equipment).

For methanol concentrations of:

≥200 ppm and ≤2000 ppm – Air-purifying respirator with full facepiece and organic vapor cartridge(s) or air-purifying full facepiece respirator with an organic vapor canister or a full facepiece powered air-purifying respirator fitted with organic vapor cartridge(s).

>2000 ppm and <25,000 ppm – Positive-pressure full facepiece supplied-air respirator, or continuous-flow full facepiece supplied-air respirator.

≥25,000 ppm or unknown concentration (such as in emergencies) – Positive-pressure self-contained breathing apparatus with full facepiece. Positive-pressure supplied-air respirator with full facepiece equipped with an auxiliary positive-pressure self-contained breathing apparatus escape system.

Ventilation

Local exhaust: Recommended when appropriate to control employee exposure.

Mechanical (general): Not recommended as the sole means of controlling employee exposure.

Protective gloves:
Neoprene or rubber.

Eye protection:
Chemical safety goggles.

***Additional protective equipment:**
For operations where spills or splashing can occur, use chemical protective clothing, including gloves and boots. A safety shower and eye bath should be readily available.

Special precautions

***Precautions to be taken in handling and storing:**
Store in a cool, well-ventilated area. Do not expose to temperatures above 49°C (120°F). Keep away from heat, sparks and flame. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Use only DOT-approved containers. Use spark-resistant tools. Do not load into compartments adjacent to heated cargo. When transferring follow proper grounding procedures. Use with adequate ventilation. Provide emergency exhaust. Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Discard contaminated leather clothing.

* New or revised information; previous version dated December 31, 1990.

Glossary for Components information table

ACGIH – American Conference of Governmental Industrial Hygienists
CAS – Chemical Abstracts Service
Ceiling – The concentration that should not be exceeded during any part of the working day.
IDLH – Immediately Dangerous to Life or Health
OSHA – Occupational Safety and Health Administration
PEL – Permissible exposure limit
SARA – Superfund Amendments and Reauthorization Act
Skin – Potential contribution to overall exposure possible via skin absorption.
STEL – Short-term exposure limit; 15-min. time-weighted average
TLV – Threshold limit value
TWA – 8-hour time-weighted average

Chemical Group
Hoechst Celanese Corporation
*P.O. Box 819005/Dallas, Texas 75381-9005
*Information phone: 214 277 4000
Emergency phone: 800 424 9300 (CHEMTREC)

12-13-94

MATERIAL SAFETY DATA SHEET

MSDS CODE NO. 5B81-83 ORIGINAL ISSUE DATE: 8/85 REVISED: 2/94

I. IDENTIFICATION

24 HOUR EMERGENCY TELEPHONE NUMBER
CHEMTREC 800-424-9300

PRODUCT NAME: Anhydrous Ammonia
COMMON NAME: Ammonia
SHIPPING NAME: Ammonia, Anhydrous, Liquefied, 2.2
UN 1005, RQ, Inhalation Hazard.

MANUFACTURER AND/OR DISTRIBUTOR:
LaRoche Industries Inc.
1100 Johnson Ferry Road N.E.
Atlanta, GA 30342
(404) 851-0300; (404) 491-7987 after hours
Prepared By: R. C. Cannon

II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

MATERIAL	FORMULA	CAS. NO.:	%WT.		EXPOSURE LIMITS		
					OSHA-PEL	ACGIH	
			C-Grade	P-Grade		TLV	STEL
Ammonia	NH_3	7664-41-7	99.5	99.995	50 ppm	25 ppm	35 ppm
Water	H_2O	7732-18-5	0.4	33 ppm	None Established	None Established	
Oil	—	—	0.1	2 ppm	5mg/M³	5mg/M³	—

III. PHYSICAL DATA

BOILING POINT (°F) —28.1°	SPECIFIC GRAVITY (H_2O=1) 0.62 @ 60°F
MELTING POINT (°F) —107.9°	PERCENT VOLATILE BY VOLUME (%) 100
VAPOR PRESSURE (mm Hg.) 4802.9 (94 psi) @ 60°F	pH Approx. 11.6 for 1 N Soln. in water
VAPOR DENSITY (AIR=1) 0.60 @ 32°F	SOLUBILITY IN WATER 33% (Wt.) @ 68°F

APPEARANCE AND ODOR: Colorless gas or liquid with extremely pungent odor.

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used) Not Applicable
FLAMMABLE LIMITS 16-25% in air

NFPA HAZARD RATING			
	HEALTH	3	(High)
	FIRE	1	(Slight)
	REACTIVITY	0	(Least)

EXTINGUISHING MEDIA: With a source of ignition, ammonia will burn in the range of 16-25% in air. Use water fog or spray to extinguish flames.

SPECIAL FIRE FIGHTING PROCEDURES: Stop flow of gas; move containers from fire zone if possible. Stay clear of tank heads. Use water to cool fire-exposed containers and protect personnel. Use water spray to control vapors. Personnel must be equipped with appropriate protective clothing and respiratory equipment. Do not put water on liquid ammonia.

V. REACTIVITY DATA

STABILITY	Unstable		CONDITIONS TO AVOID: Heating above ambient temperatures causes the vapor pressure of ammonia to increase rapidly.
	Stable	X	

INCOMPATIBILITY: Ammonia can react violently with strong acids. Under certain conditions, ammonia reacts with bromine, chlorine, fluorine or iodine to form compounds which explode spontaneously. Reactions of ammonia with gold, silver or mercury to form explosive fulminate-like compounds have been reported.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen on heating to over 850°F. The decomposition temperature may be lowered to 575°F by contact with certain metals such as nickel.

HAZARDOUS POLYMERIZATION	May Occur		CONDITIONS TO AVOID: Not Applicable.
	Will Not Occur	X	

NOTE: Anhydrous Ammonia is subject to the reporting requirements of SARA (1986, section 313 of Title III) and 40 CFR Part 372.

VI. SPILL OR LEAK PROCEDURES

TRANSPORTATION EMERGENCIES
Call CHEMTREC 800-424-9300

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED: Stop leak if feasible. Avoid breathing ammonia. Evacuate personnel not equipped with protective clothing and equipment. Use copious amounts of water spray or fog to absorb ammonia vapor. DO NOT put water on liquid ammonia. Contain run-off to prevent ammonia from entering a stream, lake, sewer or ditch.

Release of 100 lbs. or more of ammonia within 24 hours must be reported to the National Response Center at 800-424-8802, as well as appropriate local and state agencies. Immediate (within minutes) reporting is required.

WASTE DISPOSAL METHOD:
Recover ammonia if feasible. Otherwise, let ammonia evaporate if appropriate. Only personnel experienced in ammonia spills should add water to liquid ammonia. Dispose of diluted ammonia as a fertilizer or in an industrial process.

EPA Waste Identification No.: Not Applicable

For hazardous waste regulations, call the RCRA Hotline at 800-424-9346.

VII. HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

IDLH Level=500 ppm

MAJOR EXPOSURE HAZARD

[X] INHALATION [X] SKIN CONTACT [X] EYE CONTACT [ ] INGESTION

Ammonia is a strong alkali and readily damages all body tissues. Ammonia is not a cumulative metabolic poison, nor is it a listed carcinogen by IARC, NPT or OSHA. **Inhalation:** Depending on exposure concentration and duration, effects can vary from none or only mild irritation, to obstruction of breathing from laryngeal and bronchial spasm, to edema and severe damage of the mucous membranes of the respiratory tract with possible fatal results. Latent edema and residual reduction in pulmonary function may occur. **Skin Contact:** Prolonged contact with high concentrations can cause painful tissue damage, frostbite and serious chemical burns. **Eye Contact:** Exposure to liquid or high concentrations of vapor can cause painful, instant and possibly irreversible damage to tissues such as the conjunctiva, cornea and lens. Glaucoma and opacities may occur. **Ingestion:** Tissue damage, chemical burns, nausea and vomiting can occur. Ammonia is a gas under normal atmospheric conditions and ingestion is unlikely.

EMERGENCY AND FIRST AID PROCEDURES:
Eye Contact: Flush with large amount of water for at least 15 minutes then immediately seek medical aid. **Inhalation:** Remove from exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen as needed. Seek immediate medical aid. **Skin Contact:** Immediately flush with large quantities of water for at least 15 minutes while removing clothing. Clothing frozen to the skin should be thawed with water before removal. Seek immediate medical aid. **Ingestion:** Do not induce vomiting. Have the victim drink large quantities of water if conscious. Immediately seek medical aid. Never give anything by mouth to an unconscious person.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY:
Respiratory protection approved by NIOSH/MSHA for ammonia must be used when exposure limits are exceeded. Whether a chemical cartridge respirator or a self-contained breathing apparatus is sufficient for effective respiratory protection depends on the type and magnitude of exposure.

SKIN:
Rubber gloves and rubber or other types of approved protective clothing should be used to prevent skin contact. A face shield should be used for increased protection from contact with liquid.

EYE:
Chemcial splash goggles, approved for use with ammonia, must be worn to prevent eye contact with liquid or vapor. A face shield should be used for increased protection from contact with liquid.

VENTILATION AND ABSORPTION:
Local positive pressure and/or exhaust ventilation should be used to reduce vapor concentrations in confined spaces. Ammonia vapor, being lighter than air, can be expected to dissipate to the upper atmosphere. Ammonia concentrations may also be reduced by the use of an appropriate absorbent or reactant material.

OTHER PROTECTIVE EQUIPMENT AND MEASURES:
Emergency eyewash stations and deluge showers must be available in the work area. Post a list of emergency response contacts and telephone numbers.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Refer to the ANSI K61.1 standard for storage and handling information. Protect containers from physical damage and temperatures exceeding 120° F. Use only approved storage systems. Zinc, copper, silver, cadmium and their alloys must not be used in ammonia systems since they can be rapidly corroded by it. Avoid hydrostatic pressure, which can cause equipment rupture, by adhering to proper filling procedures and the use of hydrostatic pressure relief valves where appropriate.

OTHER COMMENTS:
Contact lenses must not be worn when working with ammonia.